

Safety Data Sheet

Tris Borate EDTA Buffer, 20X

CAROLINA[®]
www.carolina.com

Section 1 Product Description

Product Name: Tris Borate EDTA Buffer, 20X
Recommended Use: Science education applications
Synonyms: Electrophoresis Buffer, TBE Buffer Concentrate
Distributor: Carolina Biological Supply Company
2700 York Road, Burlington, NC 27215
1-800-227-1150
Chemical Information: 800-227-1150 (8am-5pm (ET) M-F)
Chemtrec: 800-424-9300 (Transportation Spill Response 24 hours)

Section 2 Hazard Identification

Classification of the chemical in accordance with paragraph (d) of §1910.1200;

DANGER



May damage fertility or the unborn child.

GHS Classification:
Reproductive Toxicity Category 1B

Other Safety Precautions: IF exposed or concerned: Get medical advice/attention.

Section 3 Composition / Information on Ingredients

| <u>Chemical Name</u> | <u>CAS #</u> | <u>%</u> |
|---|--------------|----------|
| Water | 7732-18-5 | 85.4 |
| Tris (hydroxymethyl) aminomethane | 77-86-1 | 9.2 |
| Boric Acid | 10043-35-3 | 4.7 |
| Ethylenediaminetetraacetic acid sodium salt dihydrate | 6381-92-6 | 0.6 |
| Sodium Hydroxide | 1310-73-2 | 0.1 |

Section 4 First Aid Measures

Emergency and First Aid Procedures

Inhalation: In case of accident by inhalation: remove casualty to fresh air and keep at rest.
Eyes: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Skin Contact: After contact with skin, wash immediately with plenty of water.
Ingestion: If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

Section 5 Firefighting Procedures

Extinguishing Media: Use dry chemical, CO2 or appropriate foam.
Fire Fighting Methods and Protection: Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.
Fire and/or Explosion Hazards: N/A
Hazardous Combustion Products: Carbon dioxide, Carbon monoxide, Nitrogen oxides

Section 6 Spill or Leak Procedures

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Steps to Take in Case Material Is Released or Spilled:

Exposure to the spilled material may be irritating or harmful. Follow personal protective equipment recommendations found in Section 8 of this SDS. Additional precautions may be necessary based on special circumstances created by the spill including; the material spilled, the quantity of the spill, the area in which the spill occurred. Also consider the expertise of employees in the area responding to the spill. Avoid creating and inhaling dust. Ventilate the contaminated area. Isolate area. Keep unnecessary personnel away. Avoid creating and inhaling spray or mist. Avoid contact with skin and eyes.

Environmental Precautions:

Avoid breathing material. Avoid contact with skin and eyes.
Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container. Do not allow the spilled product to enter public drainage system or open waterways.

Section 7

Handling and Storage

Handling: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required.
Storage: Store locked up. Suitable for any general chemical storage.
Storage Code: Green - general chemical storage

Section 8

Protection Information

| Chemical Name | ACGIH | | OSHA PEL | |
|------------------|--|---|-------------|--------|
| | (TWA) | (STEL) | (TWA) | (STEL) |
| Boric Acid | 2 mg/m3 TWA (inhalable fraction, listed under Borate compounds, inorganic) | 6 mg/m3 STEL (inhalable fraction, listed under Borate compounds, inorganic) | N/A | N/A |
| Sodium Hydroxide | N/A | N/A | 2 mg/m3 TWA | N/A |

Control Parameters

Engineering Measures:

No exposure limits exist for the constituents of this product. General room ventilation might be required to maintain operator comfort under normal conditions of use.

Personal Protective Equipment (PPE):

Lab coat, apron, eye wash, safety shower.

Respiratory Protection:

No respiratory protection required under normal conditions of use.

Eye Protection:

Wear chemical splash goggles when handling this product. Have an eye wash station available.

Skin Protection:

Avoid skin contact by wearing chemically resistant gloves, an apron and other protective equipment depending upon conditions of use. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.

Gloves:

No information available

Section 9

Physical Data

Formula: This product is a mixture.
Molecular Weight: N/A
Appearance: Colorless Liquid
Odor: None
Odor Threshold: No data available
pH: Approx. 8.3
Melting Point: No data available
Boiling Point: 100 C
Flash Point: No data available
Flammable Limits in Air: N/A

Vapor Pressure: N/A
Evaporation Rate (BuAc=1): N/A
Vapor Density (Air=1): N/A
Specific Gravity: approx. 1.17
Solubility in Water: Soluble
Log Pow (calculated): No data available
Autoignition Temperature: No data available
Decomposition Temperature: No data available
Viscosity: No data available
Percent Volatile by Volume: N/A

Section 10

Reactivity Data

Reactivity: No data available
Chemical Stability: Stable under normal conditions.
Conditions to Avoid: None known.
Incompatible Materials: Water-reactive materials, Acetic anhydride, Alkali Carbonates, Hydroxides, Alkali and Alkaline Metals
Hazardous Decomposition Products: Nitrogen oxides, Carbon dioxide, Carbon monoxide

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Hazardous Polymerization:

Will not occur

Section 11

Toxicity Data

Routes of Entry Ingestion, Skin contact.
Symptoms (Acute): N/A
Delayed Effects: No data available

Acute Toxicity:

| Chemical Name | CAS Number | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|---|------------|---|-------------|-----------------|
| Water | 7732-18-5 | Oral LD50 Rat 90000 mg/kg | | |
| Boric Acid | 10043-35-3 | Oral LD50 Rat 2660 mg/kg | | |
| Ethylenediaminetetraacetic acid sodium salt dihydrate | 6381-92-6 | Oral LD50 Mouse 2050 mg/kg Oral LD50 Rat 2 GM/KG Oral LD50 Rabbit 2300 mg/kg | | |

Carcinogenicity:

| Chemical Name | CAS Number | IARC | NTP | OSHA |
|------------------|------------|------------|------------|------------|
| Boric Acid | 10043-35-3 | Listed | Not listed | Not listed |
| Sodium Hydroxide | 1310-73-2 | Not listed | Not listed | Not listed |

Chronic Effects:

Mutagenicity: No evidence of a mutagenic effect.
Teratogenicity: Evidence of a teratogenic effect (birth defect).
Sensitization: No evidence of a sensitization effect.
Reproductive: Evidence of negative reproductive effects.
Target Organ Effects:
Acute: See Section 2
Chronic: Not listed as a carcinogen by IARC, NTP or OSHA., Mutation data cited., Reproductive data cited.

Section 12

Ecological Data

Overview: This material is not expected to be harmful to the ecology.
Mobility: No data
Persistence: Dissolved into water
Bioaccumulation: No data
Degradability: No data
Other Adverse Effects: No data

| Chemical Name | CAS Number | Eco Toxicity |
|------------------|------------|--|
| Water | 7732-18-5 | No data available |
| Boric Acid | 10043-35-3 | 48 HR EC50 DAPHNIA MAGNA 115 - 153 MG/L |
| Sodium Hydroxide | 1310-73-2 | Aquatic LC50 (96h) Rainbow Trout 45.4 MG/L |

Section 13

Disposal Information

Disposal Methods: Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance.
Waste Disposal Code(s): Not Determined

Section 14

Transport Information

Ground - DOT Proper Shipping Name: Not regulated for ground transport by US DOT.
Air - IATA Proper Shipping Name: Not regulated for air transport by IATA.

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Section 15

Regulatory Information

TSCA Status:

All components in this product are on the TSCA Inventory.

| Chemical Name | CAS Number | § 313 Name | § 304 RQ | CERCLA RQ | § 302 TPQ | CAA 112(2) TQ |
|------------------|------------|------------|------------|-------------------------|-----------|---------------|
| Boric Acid | 10043-35-3 | No | No | No | No | No |
| Sodium Hydroxide | 1310-73-2 | No | 1000 lb RQ | 1000lb (454kg) final RQ | No | No |

California Prop 65:

No California Proposition 65 ingredients

Section 16

Additional Information

Revised: 08/21/2018

Replaces: 06/15/2018

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The information provided in this (Material) Safety Data Sheet represents a compilation of data drawn directly from various sources available to us. Carolina Biological Supply makes no representation or guarantee as to the suitability of this information to a particular application of the substance covered in the (Material) Safety Data Sheet.

Glossary

| | | | |
|--------|---|------|---|
| ACGIH | American Conference of Governmental Industrial Hygienists | NTP | National Toxicology Program |
| CAS | Chemical Abstract Service Number | OSHA | Occupational Safety and Health Administration |
| CERCLA | Comprehensive Environmental Response, Compensation, and Liability Act | PEL | Permissible Exposure Limit |
| DOT | U.S. Department of Transportation | ppm | Parts per million |
| IARC | International Agency for Research on Cancer | RCRA | Resource Conservation and Recovery Act |
| N/A | Not Available | SARA | Superfund Amendments and Reauthorization Act |
| | | TLV | Threshold Limit Value |
| | | TSCA | Toxic Substances Control Act |
| | | IDLH | Immediately dangerous to life and health |